_300_


```
        ┌─301a            ┌─301b             ┌─301c                        ┌─301d      ┐
 ┌──────────────┐  ┌──────────────┐  ┌──────────────┐           ┌──────────────┐     │
 │ APPLICATION  │  │ APPLICATION  │  │   BROWSER    │   [...]    │ APPLICATION  │     │ 301
 │  PROGRAM 1   │  │  PROGRAM 2   │  │   PROGRAM    │           │  PROGRAM N   │      │
 └──────────────┘  └──────────────┘  └──────────────┘           └──────────────┘     ┘
```

OPERATING SYSTEM
(e.g., WINDOWS 9X/NT/2000/XP, SOLARIS, UNIX, LINUX, MAC OS, OR LIKE)

GRAPHICAL
USER INTERFACE

315   310

DEVICE DRIVERS
(e.g., WINSOCK)   320

BIOS
(MICROCODE)   330

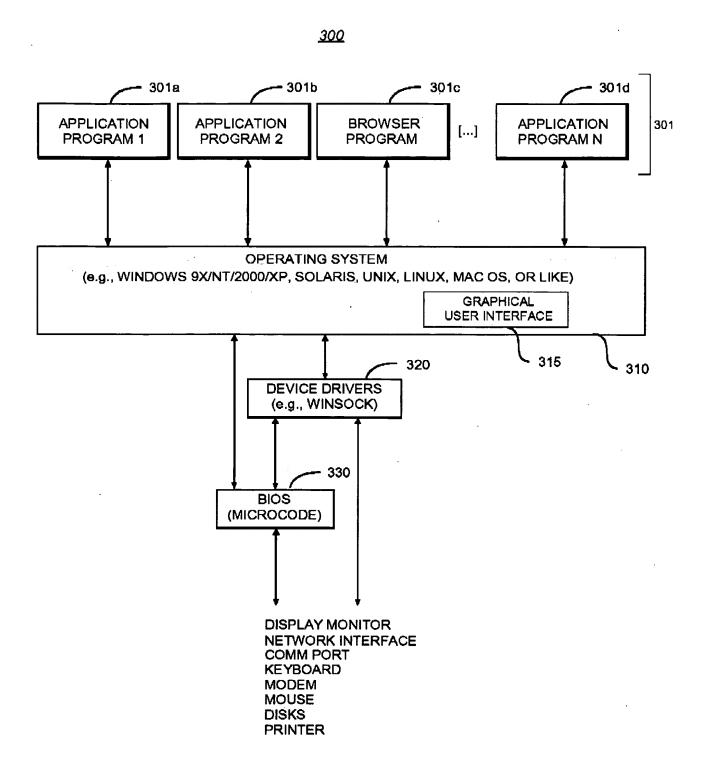DISPLAY MONITOR
NETWORK INTERFACE
COMM PORT
KEYBOARD
MODEM
MOUSE
DISKS
PRINTER

FIG. 3

METHOD
STEPS
600

BEGIN:

601: INVOCATION OF THE FLOW CONTROL FILTER BEGINS
WITH THE MTA (I.E., A CHILD MTA OF THE ORIGINAL
(PARENT) LISTENER) CONNECTING TO THE FLOW CONTROL
FILTER (E.G., USING SENDMAIL MILTER PROTOCOL); THE
FILTER ACCEPTS THE CONNECTION.

602: THE MTA AND THE FILTER PERFORM A HANDSHAKE
SEQUENCE, INCLUDING FEATURE AND PARAMETER
NEGOTIATION. AT THE CONCLUSION OF THE HANDSHAKE
SEQUENCE, A NEW THREAD IS CREATED (I.E., IN THE
FLOW CONTROL ENGINE) FOR PROCESSING THE NEW
CONNECTION/MESSAGE.

603: NOW, THE MTA PASSES TO THE FILTER THE
CORRESPONDING CONNECTION INFORMATION (E.G., IP
ADDRESS AND HOST NAME) OF THE SENDING MTA.

604: BASED ON THE CONNECTION INFORMATION, THE
FILTER MAY LOOK UP MATCHING CLASS DATA FROM THE
CONFIGURATION FILE.

605: IN THE EVENT THAT NO MATCHING CLASS DATA IS
FOUND, THE FILTER WILL ASSUME UNRESTRICTED ACCESS
FOR THE HOST AND THEREFORE WILL ACCEPT THE
CONNECTION AND MESSAGE. IN THAT CASE, THE FLOW
CONTROL ENGINE THREAD HANDLING THE CONNECTION MAY
TERMINATE, AS THERE IS NO FURTHER FILTERING WORK
TO BE DONE FOR THIS INCOMING CONNECTION AND
MESSAGE; THE MTA PROCEEDS NORMALLY WITH NO FURTHER
INTERACTION WITH THE FILTER. OTHERWISE, THE
METHOD PROCEEDS TO THE FOLLOWING FILTERING STEPS.

606: THE METHOD TESTS WHETHER CLASS LIMITS HAVE
BEEN REACHED.

CONTINUE
TO FIG. 6B

FIG. 6A

CONTINUE
FROM FIG. 6A

607: IN THE EVENT THAT LIMITS HAVE NOT BEEN REACHED (I.E., TRUE), THE FILTER INSTRUCTS THE MTA TO CONTINUE AND INCREMENTS THE CURRENT CONNECTION COUNT.

608: OTHERWISE (I.E., TRUE), THE METHOD TERMINATES WITH THE FILTER REJECTING THE CONNECTION AND RETURNING AN ADMINISTRATOR-DEFINED ERROR CODE.

609: IN THE EVENT THAT THE PROCESS DID NOT TERMINATE, THE MTA REPORTS THE SENDER INFORMATION TO THE FILTER; THIS OCCURS IN RESPONSE TO THE MAIL FROM SMTP PHASE.

610: THE METHOD NOTES THE SENDER (I.E., WHO IS THE SENDER) IN THE CLASS. THE ADMINISTRATOR-DEFINED CLASS MAY INCLUDE, FOR EXAMPLE, A SENDER-BASED PARAMETER INDICATING THAT THE FILTER SHOULD NOTE THE NUMBER OF UNIQUE SENDERS THAT HAVE ARRIVED IN A GIVEN TIMEFRAME FOR THIS PARTICULAR HOST (OF THE CLASS).

611: IN A MANNER SIMILAR TO ABOVE, THE METHOD TESTS WHETHER CLASS' SENDER LIMITS HAVE BEEN REACHED.

612: IN THE EVENT THAT LIMITS HAVE NOT BEEN REACHED (I.E., TRUE), THE FILTER INSTRUCTS THE MTA TO CONTINUE AND INCREMENTS THE CURRENT UNIQUE SENDER TOTALS.

613: OTHERWISE, THE METHOD TERMINATES WITH THE FILTER REJECTING THE MESSAGE (RETURNING ANY ADMINISTRATOR-DEFINED ERROR CODE).

CONTINUE
TO FIG. 6C

FIG. 6B

CONTINUE
FROM FIG. 6B

614: IN THE EVENT THAT THE FILTERING PROCESS HAS
NOT TERMINATED BASED ON SENDER INFORMATION, THE
METHOD PROCEEDS TO TEST RECIPIENT (RCPT TO)
INFORMATION. THE CONFIGURATION FILE ALLOWS THE
ADMINISTRATOR TO DEFINE A CLASS THAT LIMITS THE
NUMBER OF UNIQUE RECIPIENTS RECEIVED FOR THAT
CLASS, OVER ANY GIVEN TIME SPAN. AS A GIVEN
MESSAGE MAY HAVE MULTIPLE RECIPIENTS, THE STEP
REPEATS FOR EACH RECIPIENT (INFORMATION) OF THE
MESSAGE.

615: AS BEFORE, IF SPECIFIED LIMITS ARE EXCEEDED,
THE METHOD TERMINATES WITH THE FILTER REJECTING THE
MESSAGE (RETURNING ANY ADMINISTRATOR-DEFINED ERROR
CODE.

616: OTHERWISE, THE METHOD UPDATES TOTALS AND
PROCEEDS.

617: THE MTA REPORTS THE MESSAGE BODY, WHICH MAY BE
TRANSMITTED AS ONE OR MORE BLOCKS.

618: THE METHOD UPDATES A RUNNING TOTAL OF MESSAGE
SIZE. THIS INFORMATION IS USED TO DETERMINE THE
AGGREGATE TOTAL OF BYTES RECEIVED FROM A GIVEN
SOURCE OVER A PERIOD OF TIME.

619: THE MTA REPORTS END OF MESSAGE FOR THE CURRENT
INCOMING MESSAGE.

CONTINUE
TO FIG. 6D

FIG. 6C

CONTINUE
FROM FIG. 6C

620: THE METHOD COMPARES THE MESSAGE SIZE AGAINST
CLASS LIMITS SPECIFIED IN THE CONFIGURATION FILE.

621: AGAIN AS BEFORE, IF SPECIFIED LIMITS ARE
EXCEEDED, THE METHOD TERMINATES WITH THE FILTER
REJECTING THE MESSAGE (RETURNING ANY ADMINISTRATOR-
DEFINED ERROR CODE).

623: OTHERWISE, THE INCOMING MESSAGE HAS PASSED ALL
FILTERS AND IS ACCEPTED. NOW, THE METHOD MAY
REPEAT FOR OTHER INCOMING MESSAGES.

DONE

FIG. 6D